

I claim:

1. A mechanism comprising:

a sealed quantity of electrolytic solution;

5 a measured quantity of fluid; and,

a membrane exposed to the electrolytic solution on one side and  
exposed to the fluid on another side,

10 wherein an electric potential applied to the electrolytic solution excites  
the electrolytic solution, causing the membrane to discharge a droplet of the  
fluid.

2. The mechanism of claim 1, further comprising a die encasing the  
electrolytic solution.

15 3. The mechanism of claim 2, further comprising a separated pair of  
electrodes encased with the electrolytic solution by the die, wherein an  
electric potential applied between the electrodes causes the electric potential  
to be applied to the electrolytic solution and the electrolytic solution to be  
excited.

20 4. The mechanism of claim 3, further comprising a power source to apply  
the electric potential between the electrodes.

25 5. The mechanism of claim 2, wherein the die comprises a silicon die.

6. The mechanism of claim 1, further comprising a nozzle plate over the  
membrane and holding the measured quantity of fluid.

30 7. The mechanism of claim 6, further comprising a fluid supply providing  
the measured quantity of fluid through an inlet in the nozzle plate.

8. The mechanism of claim 6, wherein the nozzle plate is an injection-molded nozzle plate.

9. The mechanism of claim 1, wherein the membrane is a thin and flexible  
5 membrane.

10. The mechanism of claim 1, wherein the electric potential applied to the electrolytic solution pressurizes the electrolytic solution, displacing the membrane, which displaces the fluid, discharging the droplet of the fluid.

11. The mechanism of claim 1, wherein the electric potential applied to the electrolytic solution transfers energy from the electrolytic solution to the membrane, which transfers the energy to the fluid, discharging the droplet of the fluid.

12. The mechanism of claim 11, wherein the energy is transferred from the electrolytic solution to the membrane and from the membrane to the fluid via a shock wave.

13. A print cartridge comprising:  
a print head mechanism;  
a print head motor to advance the print head mechanism horizontally over the media;  
a die disposed in the print head mechanism and encasing a pair of  
25 separated electrodes and a quantity of electrolytic solution;  
a plate disposed in the print head mechanism and holding a quantity of ink; and,  
a membrane disposed in the print head mechanism between the die and the plate and exposed to the electrolytic solution on one side and to the  
30 ink on another side,  
wherein an electric potential applied between the electrodes excites the electrolytic solution, causing the membrane to discharge a droplet of the ink.

14. The print cartridge of claim 13, further comprising an inkjet nozzle disposed within the print head mechanism, wherein the die, the plate, and the membrane are disposed within the inkjet nozzle.

5

15. The print cartridge of claim 14, further comprising one or more additional inkjet nozzles disposed within the print head mechanism, each additional inkjet nozzle having disposed therein:

an additional die encasing a pair of additional separated electrodes and  
10 a quantity of additional electrolytic solution;

an additional plate holding a quantity of additional ink; and,

an additional membrane between the additional die and the additional plate and exposed to the additional electrolytic solution on one side and to the additional ink on another side,

15 wherein an electric potential applied between the additional electrodes excites the additional electrolytic solution, causing the additional membrane to discharge a droplet of the additional ink.

16. The print cartridge of claim 13, further comprising an ink supply  
20 providing the quantity of ink through an inlet in the plate.

17. The print cartridge of claim 16, further comprising an ink cartridge storing the ink supply.

25 18. A method comprising:

applying an electric potential to a sealed quantity of electrolytic solution on one side of a membrane having a measured quantity of fluid on another side of the membrane;

exciting the electrolytic solution as result of the electric potential  
30 applied to the electrolytic solution; and,

discharging a droplet of the fluid by the membrane as a result of the electrolytic solution being excited.

19. The method of claim 18, further comprising, prior to discharging the droplet of the fluid:

pressurizing the electrolytic solution as a result of the electric potential  
5 applied to the electrolytic solution; and,

displacing the membrane as a result of the electrolytic solution being  
pressurized,

wherein the droplet of the fluid is discharged by being displaced as a  
result of the membrane being displaced.

20. The method of claim 18, further comprising, prior to discharging the  
droplet of the fluid:

transferring energy from the electrolytic solution to the membrane as a  
result of the electric potential applied to the electrolytic solution; and,

transferring the energy from the membrane to the fluid, causing the  
droplet of the fluid to be discharged.